Letter to the Editor

Dear CrossTalk Editor,

Kevin Stamey's sponsor note, "Why Do Projects Fail?" in CrossTalk's June 2006 issue was encouraging. Software people are finally starting to realize that systems engineering is necessary to their success. What Stamey observes is mostly correct. But he does omit several items, some of which were touched on by the articles in the June issue.

He omits Configuration Management (CM). Without it you are doomed to fail. Who hasn't been burned by some cowboy coder who decided to make an *improvement* without telling anyone, let alone obtaining authorization, delaying testing and causing previously working code modules to fail unexpectedly. Even finding the latest version of a document challenges most organizations.

But CM is really a subset of communication and coordination. When I worked in acquisition, I included a glossary of every term used so there would be no mix-ups, as in Alan Jost's article. Anyone who does not define their terminology is asking for protests, screw-ups, and lawsuits. Why including a glossary isn't standard practice is a mystery. It should continue into the development work by instantiating a project glossary that goes to the level of detail of the units used in calculations.

As Capers Jones alludes to in his article, lack of adequate resources is a root cause of failure. Lack of ethics and moral courage on the part of management and engineering exacerbates the problem, as does outside influences such as political pressure and executives who want to *make the numbers* to get their bonus; congress may cancel funding if progress is not shown. With such a situation, misleading status reports are sure to result, making the situation even more critical later on.

Tim Perkins has the best high-level diagram that I have seen. I infer that it puts too much faith in CMMI-type answers, but it captures the paths to the real root causes. However, Item 150 is a constraint that must be considered in the Systems Architecture; it is not a valid cause of project failure.

Between large, complex, unprecedented systems and small routine, incremental improvements to COTS, there is a wide range of processes that should be used. Processes must be tailored to fit the situation. This requires that competent people be used. Ones who understand, not merely check off boxes on some list. They must truly understand the essence of what they are doing and not just chant the black magic incantations they were promulgated by some professor.

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